REMARKS/ARGUMENTS

Claims 1-14 are currently pending in this application.

Claim Rejections - 35 USC §103

Claims 1-4, 7, 9-11 and 14 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent Application Publication No. 2003/0096608 to Mortensen et al. (Mortensen) in view of an article by Vucetic et al. (hereinafter "Vucetic").

The central purpose of Mortensen is to provide a method for handling a congestion situation in a digital mobile communication network (paragraph 0013). The central purpose of the present invention is to coordinate different radio resource management (RRM) algorithms that are acting on the same radio link (RL). This coordination prevents two or more algorithms from acting on the same RL at the same time (application paragraph 0105).

The present invention provides a specific solution to the problem of multiple RRM algorithms acting on the same RL at the same time. Unlike Mortensen, the present invention is not concerned with the general traffic flow through the mobile communication networks and is not attempting to regulate traffic flow. The methods of claims 1 and 9 are specific to scheduling RRM algorithms. When no RRM algorithms are performing on a RL, the RL is in an idle state. When a RRM

algorithm commences performance on a RL, the RL is transitioned into a busy state and no other RRM algorithms can act on that RL. Once the RRM algorithm is finished performing on the RL, the RL is returned to the idle state where, if necessary, it can be acted upon by another RRM algorithm (paragraphs 0102, 0103). This occurs without regard to general congestion or parameter sets.

Mortensen discloses a method where upon the detection of a congestion situation, the RNC switches parameter sets in order to control the congestion (paragraph 0031). The embodiment disclosed in paragraph 0037 is indicative of the method Mortensen employs to manage the load on the network. The mobile phone is provided with a standard parameter set and one or more alternate parameter sets. The mobile phone is then able to "switch into an alternative mode of operation when a congestion situation occurs to make more efficient use of the available channel capacity" (paragraph 0037). The Examiner suggests that the meaning of the "alternative mode" is an "idle (sleep inactive) or busy" mode (Page 3, line 11 of the second Office Action); Applicants respectfully disagree with this interpretation.

Mortensen's use of the phrase "alternate mode" means to switch the mobile phone to using an alternative parameter set (paragraphs 0036-0037). This is not the same as the present invention's use of the terms "idle" and "busy". In the context of the present invention, the term "idle" does not mean sleep; it refers to a state where the RL is not being acted upon by a RRM algorithm. A RL is still active

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in all other respects while in an idle state. Claim 9 recites a radio link that is placed in a busy state for the duration of an algorithm's execution, whereby all other RRM algorithms are denied access to the radio link until the completion of the algorithm. As such, the disclosure of Mortensen does not anticipate the present invention as recited in claim 9.

The Applicants respectfully disagree with the Examiner's assertion that the "set of predicted measurements for use by other RRM procedures" recited in claim 9 is anticipated by the multiple parameter sets disclosed in paragraphs 0031, 0034, and 0037 of Mortensen. Mortensen discloses in relevant part that "more than two parameter sets can be utilized in order to allow a finer level of adaptation of the communication parameters utilized by the mobile phone to the actual network traffic conditions" (paragraph 0034). As stated above, when a RL is being acted upon by a RRM algorithm, the RL is transferred from an idle state to a busy state. This occurs without regard to parameter sets and is completely different from Mortensen's use of parameter sets.

Furthermore, Mortensen teaches a response to congestion where all access to the signal is denied until the congestion clears, regardless of the type of access requested or the source of the congestion. It does this by switching the mobile phone from its original parameter set to an alternative or secondary parameter set. When the congestion is cleared, the mobile phone is returned to its initial

parameter set (paragraph 0032). The present invention does not switch parameter sets. Consequently, the disclosure of Mortensen is not analogous to placing the RL into a busy state as disclosed by the present invention.

Paragraph 0024 of Mortensen states that "the RRM encompasses functions like dynamic challenge allocations, call admission control, scheduling of data services and other RRM mechanisms". This is not the same as the RRM algorithms claimed in the present invention. The list of functions included in paragraph 0024 of Mortensen is a list of separate and distinct items, namely that "scheduling of data services" and "other RRM mechanisms" are two separate items, and not a combination of things that make up one item. This is significant because when read as a separate list of items, the functions listed in paragraph 0024 do not anticipate the RRM algorithms recited in the present invention.

The method taught in Mortensen for controlling congestion is not the same as the method taught in the present invention for coordinating RRM algorithms. Mortensen discloses changing an interleaving length in connection with relieving a congestion condition (paragraphs 0030 and 0033). This narrow focus is in contrast to the present invention, which permits any RRM procedures to be selected for execution upon receipt of an appropriate trigger. In contrast to Mortensen, the present invention resolves conflicts between RRM algorithms through coordination, not by increasing the interleaving length.

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The Examiner asserts that Vucetic discloses a method comprising analyzing the results of the selected RRM algorithms to determine their outcome. The applicants respectfully disagree. Vucetic discloses the use of a multi-algorithm dynamic channel allocation "mechanism to reduce blocking probability (Abstract). The mechanism includes several channel allocation algorithms implemented at the same time in the switch of a cellular network" (Abstract). The algorithms are selected so that each one of them provides a performance advantage in comparison to the others under given traffic and interference conditions. In other words, Vucetic selects algorithms according to a series of if/then statements where a given algorithm becomes passive or active based upon certain predetermined triggers without any analysis of the algorithm's results (Abstract and Section 4). In contrast to the present invention, Vucetic does not analyze of the results of the algorithms' performance to determine which algorithms to perform; Vucetic uses a trigger based on given traffic or interference conditions to select which algorithm to perform.

The Examiner further asserts that Vucetic discloses a method comprising choosing a subset of selected RRM algorithms based upon their outcome to determine an optimal set of results and executing the subset of algorithms based upon the analysis of the results as recited in the present invention. In contrast, Vucetic discloses a static method where the algorithm becomes passive under certain predetermined conditions that are not based on the algorithm's outcome.

Additionally, Vucetic makes no mention of choosing a subset of algorithms to determine an optimal set of results and fails to disclose choosing algorithms based on their outcome.

With respect to the rejection of the claims 5, 6, 8, 12, and 13 under 35 U.S.C. § 103(a) as being unpatentable over Mortensen and Vucetic and further in view of U.S. Patent No. 6,771,624 to Lu (hereinafter "Lu"), Applicants respectfully disagree in regard to Mortensen and Vucetic for the reasons set forth above. Additionally, the combination of Mortensen, Vucetic, and Lu fails to adequately disclose the method of claims 5, 6, 8, 12, and 13.

Conclusion

Based on the foregoing remarks, the combination of Mortensen and Vucetic does not lead one of ordinary skill in the art to the invention recited in independent claims 1 and 9. Therefore, the independent claims (i.e., claims 1 and 9) are distinguishable over the cited references. Because the independent claims are distinguishable over the cited references, the dependent claims (i.e., claims 2-8 and 10-14) are also distinguishable over the cited references without the need for additional comment.

It is respectfully submitted that the remarks made herein place pending claims 1-14 in condition for allowance. Accordingly, reconsideration and allowance of pending claims 1-14 are respectfully requested.

If the Examiner does not believe that the claims are in condition for allowance, the Examiner is respectfully requested to contact the undersigned at 215-568-6400.

Respectfully submitted,

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